

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Byron8LCZ@aol.com  
Subject: [4621] Batteries  
Message-ID: <951022200122\_51398430@emout04.mail.aol.com>

Hi gang,

Went to a swap today in the Detroit area. Looking for batteries ? try Falkner Enterprises, 14794 Terminal Circle, Ottumwa, Iowa 52501 phone 515-683-7621.

panasonic gel cell 12 volt 2.2 amp/hr new surplus 2.375"H x 7"W x 1.375"D  
\$8.00

power sonic gel cell 12 volt 7 amp/hr new 3.75"H x 5.875"W x 2.5"D  
\$18.00

(bought one of these today)

panasonic gel cell 12 volt 17 amp/hr new surplus 6.625"H x 7"W x 2.875"D  
\$20.00

plus many 2 volt and 6 volt batteries and  
nickel metal hydride AA batteries 1 amp/hr with tabs \$2.00

4 digit LCD panel mount volt meter with face plate, requires 9 vdc to run  
\$10.00

(bought two of these today) measures 0-200 mv, 0-2 v, 0-20 v, 0-200 vdc

they also have two pages worth of surplus goodies. (probably available for a phone call)

72, Byron WA8LCZ Detroit

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: "Eugene S. Tehansky" <tehansky@atc.ameritel.net>  
Subject: [4626] Beacon 160m at 1wt  
Message-ID: <Pine.LNX.3.91.951022221946.27848A-100000@atc.ameritel.net>

0158 utc 1.8145mhz heard clear beacon "w3rgq 1wt bcn". Last address in callbook is Berwick, PA. My qth is about 60 miles sse of DC. Had my needle moving to about 5 with background noise 1 or less.

de aa3av k

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: bcutter@teal.csn.net (Bob Cutter)  
Subject: [4613] Cascade 20M  
Message-ID: <199510222112.PAA12654@lynx.csn.net>

My Cascade seems to be working fine but I have noticed I wound L1 as 31 turns, per instructions but the schematic and board say 20. This is on the 20M board. What are others using?

72, Bob KI0G  
END

Bob Cutter, .....Glenwood Springs, CO

KI0G

bcutter@teal.csn.net

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: "Jim Kortge, NU8N" <jokortge@sun.lisp.com>  
Subject: [4612] Cascade 40/17 Modifications  
Message-ID: <9510222045.AC15359@sun>

Gang....I finally got it done. There is now documentation of the problems and changes I made putting the Cascade on 40 and 17. I will not post to the list because they are quite lengthy. E-mail me if you want a copy sent (unless of course I get 200 responses, then the list gets them).

72/73....Jim

Jim Kortge, NU8N		Bicycle Mobile Hams
jokortge@lisp.com	__o	of America
Fenton, MI	_\'<	Mizuho 17m/40m QRP SSB
.. .. .	(*)/(*)	. . . . .

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: [4617] CASCADE MOD BULLETIN #4  
Message-ID: <Pine.LNX.3.91.951022151937.28315C-100000@dt1.datatamers.com>

Attention all Cascade Owners:

The following two changes will improve (flatten) the audio response on transmit:

1) Replace the 2.2uF electrolytic cap at C9 with a 4.7uF one.

2) Replace the 0.02uF cap at C85 with a 0.047uF one.

72, Dave, W6EMD

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: adams@chuck.dallas.sgi.com (chuck adams)  
Subject: [4624] FOX: standings week 3  
Message-ID: <199510230105.BAA23154@chuck.dallas.sgi.com>

Gang,

This is difficult paperwork, so bear with me if I make errors and/or fox has a typo. Let them and me know and only us and we will work out the details. Give us log dates and times for crossreferencing. We will have plenty of time to correct and the archives have the records for backup. Isn't technology wonderful?

Thanks for your cooperation. Again, this will only be posted every three weeks and you can see why. :-) The network police will be on us big time. Already had someone jump my butt about not scheduling fox for Monday or Friday night. But the foxes set up THEIR times for THEIR dedication to this task at hand. I too consider Friday night a weekend and Monday's are rather hectic anyway. :-) Relax, it's only a movie.

Station	Total	Date	Fox	Equipment and Ant (if known)
12		Oct 3, 1995	KV2X Tom	Swan Astro 102 @ 2W 1/4 lambda 40M verticle
39		Oct 6, 1995	NA5K Smitty	TS-50 + S&S ARK4(W03Bs) @ 5W 40M Delta Loop
20		Oct 10,1995	N2CX Joe	
25		Oct 12,1995	WA4NID Dave	
14		Oct 18,1995	W03B Bob	TenTec Scout @ 4W and QRP+ 4 lambda skyloop at 55 feet G5RV with QRP+
28		Oct 18,1995	AB50U Tim	TS140S @ 4.8W 70' wire with 300ohm twin lead

-- leader(s) of the pack in order to shorten statistics

WA9PWP with 5 catches

AA0XZ W00Q KC2DU WB8ZJL all with 4 catches

-- worked more than one fox and number of times in parenthesis

0 -- AA0XZ(4) W00Q(4) KB0WZ(2)  
1 -- KC1GS(3) KC1FB(3) AA1IK(3)  
2 -- KC2DU(4) AA2WJ(3) AA2PF(3) N2KPY(2) N2MNN(3) N2CX(2)  
3 -- W3PM(3) WA3NNA(3) N3KFL(3) W3PM(2)  
4 -- NZ4I(3) N4AOX(2)  
5 -- AB5OU(2) K5UP(3) KC5EQC(2) KK5KX(2)  
6 -- N6ULU(2)  
7 -- WW7Y(2) N7MFB(2) AA7QU  
8 -- N8ET(2) WB8ZJL(4) K8DD(2) WA8ALX  
9 -- KB9IUA(2) K9DZE(3) WA9PWP(5)

DX-- VA3TAR(2) VE3DNL(2)

-- worked fox 1 time --

area calls

0 -- KB0LMQ N00CT NG0N  
1 -- W1HUE KC1DI AA10C N01E N1QPR  
2 -- KV2X N2KPY N2CX WB2SXN WJ2V N1VPK KF2PH  
3 -- WA3YON AA3AV W03B K3TKS KA3EAJ  
4 -- KE4PC WB4TPW WA4KAC KM4LT AB4EL KC4EWT  
WB4BDS WB4TBW K4JPN  
5 -- K5FO W5HNS NA5K KA5DVS AB5DG KA5T AB5EU  
KA5T WD5GNW  
6 -- AB6DG WA6HHQ KK6MC/5 WA6MOK NU6U  
7 -- AL7GQ NQ7K AA7QY  
8 -- WB8AJD N8VA KF8EE K8DD  
9 -- K9DZE W9LTL N9DD

DX -- V01CRB

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995

From: Jeffrey Herman <jeffrey@math.hawaii.edu>

Subject: [4631] Glowbugs list created

Message-ID: <Pine.SUN.3.91.951022184250.1874A-1000000@kahuna>

QRP Tube Gang,

Phil Porch has created the mailing list Glowbugs at his site - subs and unsubs will automatically be handled via Listproc. This new list will be devoted to homebrewing QRP gear utilizing Hollowstate/Firebottle technology. Construction and operation of such gear, tube theory and history, antenna/lead-in discussions, contacts made with such gear, informal skeds amongst members, posting of related forsale/wanted-to-buy equipment, parts suppliers, radio history, and similar topics will be very welcome. \*NOT\* welcome: kit-chat, ICs, sillycon, code vs no-code wars, flames of any kind, "I worked the Fox" announcements, and other off-topic topics.

Now, Phil made me the Listowner and warned me that \*all\* error messages will be forwarded to me =:o and if the list gets big I should expect many, many error messages daily =:o . I've seen the trouble the Boatanchors Listowner has encountered due to error messages generated from sites of various subscribers and am reluctant to be Listowner because of this. I just don't have the computer background to nor the time to take on that responsibility.

Therefore, do we have a volunteer that will step forward and have the title Glowbugs' Listowner bestowed upon them, and agree to babysit said list for eternity or until the torch can be passed on to some other such fool, er, volunteer?

Give this responsibility a \*lot\* of thought prior to agreeing to take over the list. You'll have to consider forgoing vacations, weekends, your spouse, your job, your kids, your life to keep the list running smoothly. You have to be diplomatic yet firm in enforcing the stated purpose of the list, and be willing to unsubs and block messages from repeat violators =:o (they undoubtedly will surface).

I now await Glowbugs' Listowner II to assume the con.

7.3 from Hawaii,  
Jeff NH6IL (ye olde ex WA6QIJ)

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: howie cahn <wb2cpu@world.std.com>  
Subject: [4627] Homebrew QRP Contesting  
Message-ID: <Pine.3.89.9510222235.A19113-0100000@world.std.com>

Hi All --

I write the 'QRP Contesting' column for NCJ, the ARRL contest publication, and I'd like some input for the next issue. The subject is homebrewing and contesting. Homebrewing is a big part of QRP yet most semi-serious QRP contesters use mainstream commercial transceivers for their contest operating. I'd like to hear from anyone who has tried to operate in a contest (particularly a non-QRP-only contest like SS, CQWW, or ARRL DX) with something other than a Yaesu/ICOM/Kenwood/TenTec, i.e., either with homebrew gear, or, with a QRP transceiver (MFJ, Index, OHR, etc.). How'd you do? Can you be competitive? Anyone interested in a contest-within-a-contest for those using homebrew stuff??

BTW, I just bought an Index QRP+ that I put on the air for the first time today. I'll give it a good workout out during the upcoming contest season. So far, I like it -- I mean I worked 9L1PG on 20 SSB on my first transmission with it, how can I complain? Hope to hear some of you in the contests.

72/73... howie  
wb2cpu@world.std.com

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: bfinch@asp.vet.purdue.edu (Robert Finch)  
Subject: [4632] kc-1 to xx-40 (or swl radios)  
Message-ID: <9510230705.AA19510@asp.vet.purdue.edu>

Thought I'd upload the following, as it is the un-edited version. Wayne UNDERSTANDABLY needed to edit it prior to insertion in the new KC-1 manual. But there are sum tidbits ya-all might find of use.

-----  
  
Condensed info on Kc-1 to XX-40 marriage.

If you are using the SWL enclosure kit modify the audio output connection between the pc board and the back panel to a piece of shielded cabling.

(Connect the shield at the output connector only. Make sure the back panel connectors are tight and that any excess paint on the inside back panel has been scrapped away where the connectors fit.)

Ground is most conveniently gotten from the back panel at the power/coax connectors. (On the 30-40 ground can be gotten from w1, which replaces c16.) Regulated 8vdc for the KC-1, use the VR 'post/hole' next to the 10 ohm resistor about in the middle of the p.c. board. Use twisted pair cabling.

The audio can be injected with  $R_A =$  to approx 1 meg ( $\pm .5$  meg) and  $C_A = .01\text{mf}$ . This will give you a nice triangular wave from the KC-1's buzzy sounding square wave. Use twisted pair or shielded cabling. Connect the ground at the KC-1 end only. Connect the signal at the junction of the 820pf, 510k, 0022mf, and 22k between the audio stages AFTER the muting fet.

(If you want the square wave then you can connect thru a series 10 ohm 47mf to the audio output connector. Or you can low level inject with  $R_A=27\text{k}$  ( $\pm 5\text{k}$ ),  $C_A=.01\text{mf}$ , and a 100pf between the two. Connect the KC-1's audio between the two caps, and the

ground to the other side of Ca. Connect to the rig at the other end of Ra.)

Keying and muting are to the cathode and anode of D4 respectfully.

VFO tap point is the base of Q2. Couple with 10pf and use a minature coax (rg-174/u) and ground at the KC-1 end only. Parallel a 1.5k across the 3.3k collector resistor on the KC-1.

Be especially careful about cable routing. Stay away from the output transistor area when/if possible. Also make sure the vfo and audio cabling are apart, if possible.

Offset is +191. Program 03A191, for instance. The IF is 8.192mhz and adds vfo to get to 30 meters. Turn sidetone off.

- \_\_\_\_\_ -

Hope this is of help. BCNU

72..baab,n6cxb



From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: N1QYZ@aol.com  
Subject: [4630] keyer ckt for cqp pgm?  
Message-ID: <951022233018\_76586927@mail04.mail.aol.com>

Can anyone point me to a file that will give me the com port pin-out ( 25 or 9 ) for the CQP logging program CW keyer. The info file for the program says that it's the same as the one used with CT.

TIA.

72&73's

Bill, AA10C

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Cosmo224@aol.com  
Subject: [4625] Mini Circuits Mixers and others...  
Message-ID: <951022220127\_130285876@emout05.mail.aol.com>

Greetings all

Re the earlier posting regarding the SBL mixers.

For simple DC receivers, the NE602 is fine but, given the opportunity, I would

substitute an SBL for performance reasons. I recently bought an R1 circuit board

and plan to make the mixer interface flexible to accomodate different mixers I have

in the junk box. The two mixers I'm itching to try is a Watkins Johnson .5 to 500

mixer that I picked up surplus. The other two mixers are Anzac units that go from 5 mhz to 1000mhz. These units have sma connectors on them so it will be easy to swap and compare. The only concern is that the mixers might have different LO input requirements. Eventually, I would like to put together an R2/T2

setup that I can configure for different bands up to 432mhz. The result of the earlier

discussion about vhf qrp sets.

There was a good review of the Siliconix mixers used in the Watkins Johnson HF1000

in a past issue of Communications Quarterly. (The article is a review of the HF1000).

Interesting devices. Everytime I go into the shack, I inventory how much stuff I need

to sell so I can purchase an HF1000. sigh...

73/72 de AA9IL  
Mike Kana

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: "Greg Taylor" <GTAYLOR@TAEX003N.tamu.edu>  
Subject: [4609] NorCal Membership?  
Message-ID: <5CBC496017@taex003n.tamu.edu>

Through an obvious failure to get my priorities straight I let my membership in NorCal elapse...do renewals still go to wa6ger?

Tnx, Greg, KD4HZ .... 72/73

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: David Adams <dave@flowserver.stem.com>  
Subject: [4615] oh yeah...  
Message-ID: <9510222145.AA10358@flowserver.stem.com>

And after o few years of searching, I finally found an unbuilt Heathkit at the Con...admittedly a relatively useless one, but until I get some one to sell me one of there rig kits, it'll have to do. It's the Heathkit Crossfire!!! The rtty/packet tuning indicator. Okay, goofy, but I'll give it a good home and I will have built a heathkit...all the parts are still in the bag...everything looks good...ah...a dream come true (sorta...).

Dave

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: David Adams <dave@flowserver.stem.com>  
Subject: [4614] Pacificon  
Message-ID: <9510222132.AA10329@flowserver.stem.com>

Interesting weekend.

Started out with my babysitter calling me at 9 am to let me know she didn't feel comfortable being resposible for Brittany for a full weekend. She'd be glad to feed my parrots though...(understand

this babysitting thing had been set up for WELL over a month and to call an hour before expected arrival to ditch the job has somewhat lessened my respect for this particular co-worker).

So....we ALL pile in the car and head up to the Hilton. Caught a few interesting antenna seminars but the highpoint of that day was supposed to be meeting the qrp group at 7pm. I arranged for Laurie to play with the three year old and off I headed for the table. 'Bout 1/2 an hour into waiting, I decided I must have goofed and no evening meeting was planned...ah well

At 12:43 am my daughter woke up and WOULD NOT go back to sleep... as a result I was one of the flashlight freaks at the swapfest! Picked up some interesting test equipment and such. Saw a lovely HW-8 for \$125, but as I didn't have \$125 for a previously built rig, I passed. I'd rather have a stack of NorCal's and explorers on my desk, anyway.

Anyway, Brittany (now tired) was getting quite grumpy, so I had to take her up to her room to nap while my wife took (and passed) her 5 wpm code test. In the process I missed the first qrp session.

When she woke up I headed down with her and saw that the nocal table was crowded. I managed to eventually flag down Jim Cates and join NorCal. (For those of you who kept noticing the tall, fat guy trying to keep track of a cute little 3 yr old blur, "HI" it was me).

Took off to see the exhibitors booths...bought lots of stuff. Interestingly, the most oft in use peripheral I saw was the rat shack vox headset. They were everywhere. Major subliminal suggestive sale...ended up buying one.

Brittany fell asleep early and Laurie was off doing her own ham thing, so I spent quite a bit of that night in the room also.

Sunday, I had Brittany, again, and headed to the qrp session. (Laurie was T-hunting) I was able to catch 10 minutes before B started getting too restless and I had to duck out. (After spending the weekend with Brittany, I now understand the idea behind qrp....Little transmitters; BIG signals...I ended up leaving right after Stan started talking...no offense...it wasn't you!)

Anyway, after that, Laurie took Brittany and I was able to (FINALLY) catch some seminars in toto (Linux, CCW) and then off to home.

Now...for those of you who think I'm whining about having a lousy time, I'm not. Pleasant surprise. Channel nine on the hotel TV system was showing the ATV groups repeater output. And they were showing ongoing seminars live. So as it happens, since Brittany came along, I saw a lot of talks I would NEVER have chosen to go to (including The Easter Island talk which I passed over immediately on the list, but since I was stuck in the room, ended up enjoying thoroughly.) Would have liked to been able to chat with some qrp folks, but family before radio, eh?! Learned quite a bit I didn't expect to...good show!

73 de dave, n9uxu

Oh yea...as a part apology for not babysitting (I guess) I came home to find a tektronix 2215 60 mhz oscilloscope sitting on my desk (don't know where she got it, but she left a not saying it was for me). Does anyone have any manuals/docs for this scope. I've always wanted a decent scope and this looks like it may be one. Thanks.

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: adam@libertynet.org (Adam O'Donnell)  
Subject: [4610] QRP clubs?  
Message-ID: <199510221858.0AA07676@philadelphia.libertynet.org>

I make this statement because of my limited funds:

If you were able to join only one QRP club (aside from QPR-L) and you live in the Philadelphia area, which one would it be?  
QRP ARCI? NE-QRP?

l8r es 72

----

Adam O'Donnell, N3RCS  
Amsat: N3RCS@AMSAT.ORG  
Internet: ADAM@LIBERTYNET.ORG

"I want to know how God created this world. I am not interested in this or that phenomenon. I want to know His thoughts, the rest are details."

-- Albert Einstein

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995

From: bfollett@ditell.com  
Subject: [4606] QRP on 6M  
Message-ID: <199510221517.JAA32717@solar.ditell.com>

Paul wrote:

>You can \*kinda\* get away with it on 6M but there is SO little action on 6 (we are for all intent at the bottom of the sunspot cycle) that except for contests and summer E openings...<

Depends on what you expect. During this summer's QST VHF contest, I turned my Yaseu 690 on, and worked 2 stations from the backyard. 2.5 watts and a whip. I thought that was promising, went inside, and hooked the 690 up to my 40M loop, tuned for max, and worked 20 more stations in about 2 hours. Yep, bottom of the totem pole, but on 6M, qrp does work...

72, Bob

-----  
Bob Follett WA7FCU  
Park City, UT 84060 Home Office E-mail: bfollett.ditell.com

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: lhalliday@creo.bc.ca  
Subject: [4620] Re[2]: Mini-Circuits  
Message-ID: <9509228144.AA814405190@mail.creo.bc.ca>

The question is out there:

> I've wondered the same thing also, and my guess would be that although  
> the SBLs are better (more dynamic range? I've been told this, I'm not  
> sure), they are more like \$10 -> \$12 each, where NE602s are more like  
> \$2.50 each. 602s are easier to find, and SBLs need RF amps. I think  
> I'm right; if not, hopefully someone will let me know.

Sure, SBL-1s are more expensive than NE602s, and harder to apply. But you get what you pay for - a completely different level of receiver performance. When you move to high-level mixers (SL6440, etc.) you go up another step. A further step up is to goodies like the D-MOS commutating mixers made by outfits like Siliconix, which, properly applied, will rival the performance of professional receivers.

The tradeoffs are well known - \*lots\* of LO drive (>20 dBm is not unheard of), and potentially complex terminations. I don't consider price to be much of a hindrance - in a world where hams pay \$400 for the most basic entry-level HF transceivers without blinking an

eyelash, \$30 for the same mixer chip the pros use is pocket change. You could build a killer 40m CW receiver for \$200 that would rival the performance of a professional receiver costing tens of thousands. But only for 40m CW...

If price is really that much of an issue, why not homebrew a diode DBM? Buy one of those packs of 1N914s from Radio Shack and select matched quads with an ohmmeter. Add a couple of toroids and you're done.

The components *are* available - I like to be proactive about component purchases, so if I see something that may prove useful some day, I buy it. If you travel, check local magazines/ham clubs/yellow pages and see what you can find. On a trip to Paris I bought some high-end audio chips (SSM2017 and TDA1514). A shop in London sold me some BFR91A UHF transistors; another some 5082-2800 Schottky diodes. A side-trip in Orlando from the AMSAT conference netted me some RF relays. A surplus store in Seattle sold me some nifty LCD displays. One flea market trip resulted in a bag full of MAR-8s and SBL-1s; I bought some SL6440s at another. You get the idea...

Laura Halliday VE7LDH

lhalliday@creo.bc.ca  
ve7ldh@amsat.org

"C'est une femme mutine, assez  
elegante, grave et legere, ayant  
le sens du confort et du plaisir  
en tout." - C. Deneuve

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: ab4el@nando.net (ab4el)  
Subject: [4634] Split the list?  
Message-ID: <9510231230.AA04154@nando.net.nando.net>

So you (un-named one-dimensional sort of opS) want to split the list up? The techies vs the people who *actually* get on the air?

I can tell who is a newbie here. :^) You are just like the ones who participate in the recurring rounds of "CW or NO CW"....

So it's *ego* to tell the story behind the story of who caught whom in the fox chase...and not valuable comparing notes first hand on how band conditions were and who was behind this or that broken QS0?

Just because you are an A-1 genius at building a radio running 1 watt, it don't meant you know you know how to *use* a radio running 1 watt. (How many of you were listed in the Field Day final results that just came out? Running QRP? See page 120, right most column, right at the

top, for me, AB4EL.)

Yesterday (Sunday) I went over to North Carolina State University campus and spent the entire afternoon guiding a group of six student hams (no code techies) through the process of designing, building and erecting a 40 m dipole...and proving the antenna was good by getting on the air with it. Thursday night I gave a one hour talk to the the current crop of license class students on what the difference between a rcvr, xmtr and xcvr is...and demonstrated the different signal modes one hears on hf.

In both cases it reminds me that the hobby contains all sorts of people, that each one sees the same aspect of this new-to-them hobby from a different frame-of-reference, that the hobby is rich because there is no \*one\* prescribed path to becoming a GOOD (QRP) OP.

I, personnaly, like the mixture of QSOs occurring on this list. I learn from it \*all\*....and I know how to use my "next" key when a particular post holds little of interest.

You say there is no QRP content in this post? Yes there is: I told those NCSU students about my QRP MOBILE adventures on 160 M SSB. Or was I stroking my ego telling people what can be done QRP?

Last week was a wash for me: I heard neither FOX, but I'll be in there again this week listening and trying. :^)

--

72/Steve/AB4EL    ab4el@NandO.net

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: bfinch@asp.vet.purdue.edu (Robert Finch)  
Subject: [4605] stinking badges returns  
Message-ID: <9510221539.AA19158@asp.vet.purdue.edu>

Thanxs for the response on my ESD message.

I can't really describe how much u all have made me smile with the responses to my 'stinking badges'.

And yes I was terse. Apparently a bit too terse.

To those who wrote and said I didn't tell the whole story about humidity, or the lack thereof; that's what I meant by suggesting that one shudn't build a radio while walking around on dry carpeting.

To those who wrote about what happens and why; great, very informative, but I still will not wear any 'stinking wrist bands' (badges).(I also won't wear jewelry around electronics that are open, and neither shud u.)

Yes it really comes down to too much voltage or too much current BETWEEN two points in a circuit and/or device. (And with complete sincerity: it is nice to know that at least one of us gets paid to do military style reporting to that effect. When I diagnose electronic equipment, I don't get paid until it is fixed. And while they may be polite and ask what did it, they don't REALLY wanna know. U get funny looks if you mention anything much more than 'it was a little short', or 'it blew up, but it's fine now'. Where do I sign up to get paid for just the diagnostic part. And again I am being serious.)

Well, u guys are simply great. And I am again being sincere.



By the way, Polyphasor in Minden, NV (I have no connection  
wid them.) has excellent materials on big ESD: Lightning.  
Read up in their book and newsletter sumtime. It really  
helped put things into focus for me. It explained the riddle  
I think Wayne wrote here about why can I hold a part and  
intentionally zap it and have it still work? (Hint is above.)

And ps., yes the subject 'title' refers to Bogart or Brooks,  
ur pick...hi..hi....

Thanxs agn. gang.

Baab,n6cxb

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: RichYHA@aol.com  
Subject: [4622] T-T 405 HF Linear Amp  
Message-ID: <951022201331\_51410757@mail02.mail.aol.com>

The Model 405 HF linear has been sold. Thanks to all who responded.

73 rich K7YHA

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: PArland@aol.com  
Subject: [4623] T-T 405 HF Linear Amp  
Message-ID: <951022201447\_76529334@mail02.mail.aol.com>

The amp is sold. Thanks to all who replied.

73 rich K7YHA

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Mike.Czuhajewski@bbs.abs.net (Mike Czuhajewski)  
Subject: [4628] Re "Variable Power Caveat"  
Message-ID: <1995Oct22.230259.19179@abs.net>

Dave--I enjoyed your item in the Sept 95 QRPP, Variable-Power Caveat, where you talked about increased harmonic output when there is a mismatch between the low pass filter and the final amp. That's one of the truisms I've always believed, but now I'm a little confused. You said that you had personally confirmed that behavior with a spectrum analyzer, so I took my Kenwood TS-670 to work, looked at it on a late model HP spectrum analyzer at various power levels from the full-bore ten watts (on 7 MHz) down to 5 milliwatts (monitored with a 100 MHz digital scope), and the harmonics did NOT increase.

The second and third harmonics stayed pretty much constant all the way down the power spectrum, at around -49 and -53 dB below the carrier, even at 5 milliwatts (and higher ones were lost in the noise floor). I would have expected them to get worse as the power dropped. I think you'll have to agree that at the 5 mw level the impedance mismatch between the final and filter has to be pretty tremendous!

The TS-670 is a ten watt, all mode (including optional FM module) quad band rig they made for a few years in the mid-80's. It covers 7, 21, 28 and 50 MHz, and was a bit more useful during low sunspots than its predecessor, the TS-660, which covered 21, 24, 28 and 50.

Here, I think, may be the key--the final amp is push-pull, biased for nice, linear operation (since it has to run SSB as well as the other modes), which we'd expect to have low harmonics even before the filter. When you saw harmonics get worse with increasing amp/filter mismatch, were you using rigs with similarly clean signals from the amp, or were they running the inherently dirty Class C operation? I have to build up a little five watt, Class C rig with power control and repeat the tests, and perhaps then I'll see the harmonics get worse.

Any comments on this from anyone will be greatly appreciated, since it challenges my belief in what I thought was one of the eternal truths of homebrewing :-). On the other hand, it's rather comforting since I can probably expect my TS-430S to be equally clean--although it's capable of 100 watts, I almost never run it over 4 watts, and frequently much less. Since it also has a final biased for a linear

mode, I would expect it to be similarly clean, and probably don't need to worry about harmonics any more. (I'm too lazy to check it at work since I'd have to lug along my big power supply.)

73 and Queue Our Pea DE WA8MCQ                      wa8mcq@bbs.abs.net

--

Mike Czuhajewski, user of the UniBoard System @ abs.net  
E-Mail: Mike.Czuhajewski@bbs.abs.net  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: [4618] Re: 10:1 fc probe  
Message-ID: <Pine.LNX.3.91.951022155016.28315D-1000000@dt1.datatamers.com>

Harvey, Just use a 10:1 'scope probe. I do, and it works fine! 72, Dave,  
W6EMD

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Craig LaBarge <74740.3166@compuserve.com>  
Subject: [4608] Re: carry bag for norcal40a  
Message-ID: <951022162106\_74740.3166\_EHB62-1@CompuServe.COM>

Myron, KB0LMQ, wrote:

>for quite some time now i have been searching for the "perfect" home  
>for my norcal 40a. the plastic shoe box just wasn't hacking it.  
>it got to be a hassle packing and unpacking everything every time  
>that i wanted to use it or take it somewhere. today i found the  
>perfect, padded, zippered, nylon carry bag at my local target store.

Great idea! I've also been eyeing up nylon, insulated lunch bags which I've seen alot lately in stores. I've seen them in several sizes and shapes and the insulation would provide padding to protect the equipment.

73, Craig WB3GCK

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Timothy.Parker@mixcom.com (Timothy Parker)  
Subject: [4607] Re: Don't need no stinkin static badges  
Message-ID: <v01510100acb017987748@[156.46.42.40]>

On the subject of static damage...

Static damage does happen! I don't care how many people claim that they don't worry about it and therefore it never happens. Someone else mentioned that the most common damage that can occur is the kind that cause latent failures and those are very hard to track back to their origin.

Several years ago I designed a circuit board which used some very high density static rams that turned out to be very susceptible to static damage. We were finding something like a 50% mortality rate in the assembled memories and started tracking them and sending the bad devices back to the manufacturer. Of course this was before most people made a big deal about ESD and we were not using any special handling precautions. It turns out that we were killing the devices with ESD. However the story gets better. :) The manufacturer was assembling 4 memory dies into a single package to get the high density device we needed. In their lab they used suction probes to pick up and place the dies on the packages under a microscope. Well it seems that even the flow of air over the die caused by the suction device was creating enough static to damage some of them. Therefore the parts were being damaged as they were being assembled.

Granted most of the devices that we deal with in this hobby are not very susceptible but it is never hurts to be cautious anyway.

ESD is a real phenomena and anyone who claims otherwise is fooling themselves.

Tim  
KB9KIT  
Brookfield, WI

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: [4619] Re: NorCal Membership?  
Message-ID: <Pine.LNX.3.91.951022155732.28315F-100000@dt1.datatamers.com>

Greg,  
The answer is yes. 72, Dave, W6EMD  
-----

On Sun, 22 Oct 1995, Greg Taylor wrote:

> Through an obvious failure to get my priorities straight I let my  
> membership in NorCal elapse...do renewals still go to wa6ger?  
>  
> Tnx, Greg, KD4HZ .... 72/73  
>  
>

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Emre Celebi <emre@cmpe.boun.edu.tr>  
Subject: [4616] Re: oh yeah...  
Message-ID: <Pine.LNX.3.91.951023010526.13075A-1000000@mercan.cmpe.boun.edu.tr>

Hi, what's that Heathkit? Why does make you so happy about?  
Could you tell?

On Sun, 22 Oct 1995, David Adams wrote:

> And after o few years of searching, I finally found an unbuilt Heathkit  
> ...ah...a dream  
> come true (sorta...).

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: Ed DeBuvitz <edeb@indirect.com>  
Subject: [4611] Re: QRP clubs?  
Message-ID: <Pine.BSD/.3.91.951022121238.24161A-1000000@bud.indirect.com>

Well Adam...I've been a member of QRPARCI for many years and have enjoyed  
the contests and the quarterly. I've also been a member of the Michigan Club.  
I suppose which one you join will depend on what you like. Try QRPARCI  
and see how you like it. I think you will.  
72 73  
Ed W5TTE  
edeb@indirect.com

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: adams@chuck.dallas.sgi.com (chuck adams)

Subject: [4629] Re: Re "Variable Power Caveat"  
Message-ID: <199510230355.DAA23335@chuck.dallas.sgi.com>

Mike is correct. As you decrease the power out, the harmonic content will not change.

I got into a discussion three years back with Dick Witzke, KE8KL, on the phone about this with the Spirit. I was running it at 2W for a while then cranked it down to 0.95W, so this was over 3 years ago as I haven't run more since. Time flies when you are having fun. So make the appropriate corrections above. He said that I should be running it (the Spirit) at full output due to the possibility that there might be increased harmonic output. I said that I didn't think so and that he should, since he had the spectrum analyzer, take a quick look at it and let me know. Later he did same and found exactly what Mike C. found, that it doesn't matter much. Mileage may vary, but I don't think so.

When Dick came out with later rigs he had the drive adjustable from 0 to full output with a trim pot. You'll note that the Classic dual-bander with adjustment accessible from the back panel. The NN1G, NorCal 40's, etc. all have a trim pot to adjust the drive level to set final output. I have no fear of setting the output to a lower level and don't expect the harmonic output to change.

Thanks to Mike C. for giving us a second data point. If anyone knows about spectrum analyzers and the measurements with same he is the one. Having access to a high dollar piece of equipment is nice. See the latest issue of QQ. QED  
Good job Mike.

I'd like Mike C. to take a rig with zener, 33V or whatever, across collector to emitter of PA and measure spectrum output, power off the rig and clip one lead and then remeasure the spectrum. I'll bet him a Big Mac next time in MD that it is the same within a single dB everywhere. I'll pay for the replacement zener.

One thing that I did not mention in the review of the Explorer II. Dick Witzke, KE8KL, owner of OHR, and many others are firm believers that you should experiment (carefully but not indiscriminantly) with circuits. Dick has taken an already good rig, the Explorer, and made it better and cheaper. I didn't have enough time to go through all the parameters but a more detailed review I will write up for QRPP, assuming that Doug will take it. :-)  
One thing that Dick did and I won't write it up here due

to copyright on the diagram (and please note that when you get the rig) is that he experimented with something that noone else has because everyone read somewhere from another famous designer that you shouldn't do other than this. Well, it was a beautiful thing that happened, the performance went up and the parts count went down. Those that have the rig on order will or should see it pretty quickly. It's a thing of beauty. Good job Dick.

Now to get a couple of individuals, netpolice and otherwise, off my case. I do not have an ego problem. I do have a sensitivity problem when accused of same. So I am going to take further contributions and spread them around in several newsletters. There ain't a free lunch. Geeez.....  
My postings were for information only. Not to brag on QSOs, work in progress, but I thought to help others along the road to success. EOT P.S. we don't need a thread on this.  
TNX

dit dit es cl

--

Chuck Adams (K5FO CP-60) adams@sgi.com  
Box 181150, Dallas, TX 75218-8150

From qrp-1@lehigh.edu Mon Oct 23 14:41:00 1995  
From: cebik@UTKVBX.UTCC.UTK.EDU  
Subject: [4633] Re: Re "Variable Power Caveat"  
Message-ID: <Pine.PMDF.3.91.951023065601.543245962B-100000@utkvx.utk.edu>

Mike,

On the increase (or not) of harmonics with alterations from designed power levels: There may be several configurations to consider: single-ended, push-pull, and parallel. And there may be several biasing points to consider: AB1, AB2, B, almost B (with a small center gap), and various degrees of C-ness (that is such a large territory. Now assuming you build each of the configurations with ability to alter the biasing for each relevant point (note, I said, assuming, not presuming), perhaps a standard design power (say 10 watts, like the rig) and a standard set of power reduction steps, along with a driver standard (certified "clean" to a certain standard point) might be enough for the experiment. The systematic tables that would emerge would be very enlightening and make one of our rules of thumb into a whole hand set of rules.

It might also guide some design trade-off questions: just one example: for a straight CW rig, is the efficiency of C justified for a design that

will vary power levels (even 1 watt down to microwatts) over the possible cleanliness of B or AB? You might keep current-draw figures if you take up the above experiment, since that is a variable in the efficiency side of the equation.

Could yield a table as famous as your toroid winding tables.

Just some ideas for the thank tank.

-73-

LB, W4RNL